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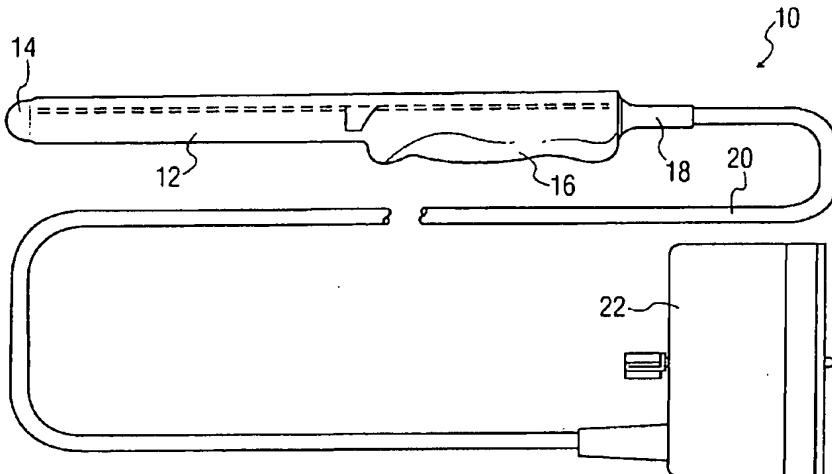
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(54) Title: **ULTRASONIC PROBE VOLUME COMPENSATION SYSTEM**



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(57) **Abstract:** An ultrasound probe includes a transducer which is pivotally mounted inside a fluid chamber for scanning a region outside the probe as the transducer is oscillated. A volume compensation balloon is attached to the fluid chamber and is partially filled with acoustic fluid at nominal (room) temperatures. The balloon is made of a high performance thermoplastic which enables the balloon to have a very thin wall. The thin wall is highly compliant as the volume of the fluid inside the balloon changes, and remains so at low temperatures of transport and use. The thin wall exhibits a low permeability to the acoustic fluid. The balloon is formed of a non elastic material and exhibits good thermal stability and high burst strength.